

# CHAPTER 29 - Landscape Architecture

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# CHAPTER 29 - Landscape Architecture

## SECTION 1 - General

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### Introduction

This chapter contains policy and procedures that apply to highway planting, highway planting restoration, replacement planting, revegetation, erosion control, safety roadside rest areas, vista points, aesthetics, the Transportation Art Program, and the Blue Star Memorial Highway Program.

The review and approval procedures for minor landscape architecture projects are delegated to the districts. See Chapter 4, Article 2, of this manual for discussion of “minor”. For design standards and details, see Chapter 900 of the *Highway Design Manual* (HDM).

### DEFINITIONS

#### Highway Planting

Vegetation placed for aesthetic, safety, environmental mitigation, or erosion control purposes, including necessary irrigation systems, inert materials, mulches, and appurtenances. Highway planting provides for a level of planting that is compatible with the surrounding environment.

#### Revegetation

Planting of indigenous plants to replace natural vegetation that is damaged or removed as a result of highway construction projects or permits requirements. This work may include irrigation systems.

#### Replacement Planting

Planting to replace planting (installed by Caltrans or others) that is damaged or removed as a result of highway construction activity, including irrigation modification and/or replacement.

#### Planting Restoration

The renovation or rehabilitation of planting areas and irrigation systems to improve access and working conditions, incorporate “design for safety” features, reduce maintenance expenditures, reduce water consumption or utilize nonpotable water. Restoration is justified when capital costs can be recovered through maintenance savings within 12 years. Improvement of access and working conditions, incorporation of safety

features, installation of Remote Irrigation Control System (RICS), and conversion to nonpotable water (see "Nonpotable Water" in Chapter 29, Section 2, Article 1 – General Policy) do not require a 12-year payback.

### **Vegetative Erosion Control**

Vegetation (grasses and wildflowers, and other materials like straw, fiber, stabilizing emulsion, protective blankets, etc.) placed to stabilize areas disturbed by grading operations, to reduce loss of soil due to the action of water or wind, and to prevent water pollution.

### **Nonpotable Water**

Water that is not suitable for drinking, but is suitable for irrigation purposes. This includes untreated sources (streams, rivers, underground water sources) as well as reclaimed water.

### **Developed Property**

Adjacent properties are considered "developed" when facilities are in place or when properties have approved construction permits. This does not include parks and open spaces unless they are part of urban developments (e.g., residential, commercial, recreational and industrial).

### **Landscaped Freeway**

A designation, as defined in Chapter 6, Title 4, of the California Code of Regulations, given to a section of freeway relative to the regulation of outdoor advertising displays.

### **Safety Roadside Rest**

A roadside area provided for motorists to stop and rest for short periods. It includes paved parking areas, drinking water, toilets, tables, benches, telephones, information panels, and may include other facilities for motorists.

### **Vista Point**

A paved area beyond the shoulder that permits travelers to safely exit from the highway to stop and view a scenic area. In addition to parking areas, trash receptacles, and interpretive displays, vista points may also provide rest rooms, drinking water and telephones.

### **Scenic Highway**

An officially designated portion of the State Highway System traversing areas of outstanding natural scenic beauty as outlined in the Streets and Highways Code, Section 263.

## **Transportation Art**

Authorized artwork created, constructed, or painted on structures and on or in other facilities or spaces that are within the transportation right of way.

## **Blue Star Memorial Highway**

Highway routes designated by the California Legislature for the purpose of paying tribute to the U.S. armed forces.

## SECTION 2 - Highway Planting

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### ARTICLE 1 - General Policy

#### **Conventional Highways**

Caltrans planting on conventional highways is limited to revegetation, erosion control, and/or other planting for traffic safety improvements such as headlight glare screening, delineation of roadway, or to provide wind breaks. Planting for aesthetic needs must be restricted to seeds and seedlings or the work must be financed and maintained by others.

#### **Controlled Access Highways**

In addition to necessary revegetation and erosion control, Caltrans will provide highway planting on controlled access highways under the following conditions:

- On new highways, highway planting is warranted where adjacent properties are developed at the time the highway contract is accepted at the completion of construction. This planting will be programmed to be under construction within two years after acceptance of the highway contract. A continuing program for highway planting that is warranted will be pursued through the programming process, in keeping with funding priorities.
- On existing highways, highway planting is warranted where adjacent properties have been developed at the time the highway contract is accepted at the completion of construction of a new interchange or major modification of an existing interchange.
- On existing highways, highway planting is warranted where adjacent properties were developed on or before June 30, 1987.
- To satisfy written agreements or Memoranda of Understanding between the State and another governmental agency.
- To mitigate for environmental impacts in compliance with an environmental document or court order.

#### **Programming and Funding**

Highway planting, revegetation, and replacement planting projects related to parent highway projects must be programmed and funded as part of the parent project. The cost for the planting should be identified in the PSR for the parent project. Procedures and guidelines can be found in the *Project Candidate List Development Manual*.

Unless the environmental document or memorandum of understanding with the local agency specifies otherwise, highway planting and replacement planting is normally done as a separate contract from the parent highway project.

### **Funding Limitations**

Caltrans highway planting and replacement planting will not exceed the allowable maximum cost per hectare (adjusted annually by the Office of State Landscape Architecture (OSLA)). If legally required, or if planting is to replace that which was provided by others, the allowable maximum cost per hectare can be exceeded. Exceptions from OSLA for exceeding the maximum cost per hectare may be requested for planting narrow right of way areas.

### **Highway planting by others**

Highway planting may be provided by others, at their cost, on conventional highways and on controlled access highways. Additional planting may be provided by others in excess of the maximum cost per hectare for a warranted planting project.

### **Replacement Planting**

Caltrans will replace highway planting (including planting installed by others) that is damaged or removed by State highway construction activity: including irrigation modification and/or replacement. Trees and other vegetation will be replaced at a rate and size determined by the District Landscape Architect (LA). Damaged or removed planting that was provided by others will be replaced in kind. Replacement planting must be under contract within a two-year period following the completion of the highway project that damaged or removed the planting.

When existing planting is removed as part of a noise barrier project, the cost for the replacement planting should be funded from the noise barrier project and the planting should be installed under a separate contract, except as noted under the heading "Planting with Noise Barriers" below.

If there is limited space for replacement planting due to new highway improvements, replacement planting may be installed outside the limits of the parent highway project or outside the State right of way, but within the community. The District LA and the appropriate public agency should negotiate and agree on the location of this planting. The replacement planting and appropriate plant establishment will be funded by the parent highway project. Maintenance of planting outside the right of way must be by others.

## **Maintenance**

Caltrans will maintain warranted and legally required planting on controlled access highways (within the allowable maximum cost per hectare). Maintenance of unwarranted planting or planting that exceeds the allowable maximum cost per hectare on controlled access highways is the responsibility of others, at their cost. Exceptions from OSLA may be requested for Caltrans to maintain planting that exceeds the maximum cost per hectare when additional costs will not increase the plantable area (e.g., rock blanket, larger plants). The maintenance of all planting on conventional highways is the responsibility of others, at their cost.

## **Separate Contract**

Planting (new or replacement) must be accomplished by separate contract, except on locally funded projects or where it is legally required to be included with other transportation improvements. If it is shown to be cost effective, replacement planting (less than \$100,000) may be included with the parent project.

## **Nonpotable Water**

Nonpotable water must be used for irrigation when it is practical and estimated capital outlay for the water system does not exceed 125% of all costs associated with using potable water. Costs in excess of 125% are to be justified on the basis of demonstrated cost savings over a 20-year life cycle.

## **Priority List**

Caltrans districts are to develop and prioritize a list of projects on controlled access highways that qualify for planting, restoration and safety (related to maintenance of planting), and will keep the list up-to-date.

## **Planting with Noise barriers**

If practical, plants will be used as integral components of noise barriers in order to discourage graffiti and resolve other visual issues.

The use of plants with noise barriers will be defined in the Project Study Report (PSR) Data Sheet or the Noise Barrier Scope Summary Report (NBSSR) and then incorporated into the project development process. The planting will be considered as part of the noise barrier for funding purposes. Planting may be installed as part of the noise barrier project or under a separate contract if this is more practicable. Planting, when included with a noise barrier, is not subject to the cost per hectare maximum limitation.

Wherever graffiti removal or other visual issues represent an ongoing maintenance expense for Caltrans, consideration must be given to covering existing noise barriers with vines and/or placing plants to screen the noise barriers.



## **Wildflower Planting**

Projects with federal participation that include planting must include California native wildflowers. Planting for traffic safety improvements (see "Conventional Highways" above), revegetation, erosion control, and irrigation-only projects are exempt from this requirement; however, they may include native wildflowers.

The minimum level of native wildflowers to be included is to be equal to one-quarter of one percent of the total funds expended for planting and irrigation.

In some situations, native wildflowers may not be practical, cost-effective or appropriate for a project. In such a case, the District LA will prepare a written determination to justify and document the reasons why native wildflower planting has been waived from the project. A copy of the determination, including an indication of the dollar value of wildflower planting waived, will be provided to OSLA, attention Wildflower Program Coordinator. A copy of the determination will also be provided as part of the PS&E submittal to the Engineering Service Center, Office of Office Engineer. As required by FHWA, an amount of money equivalent to or greater than that deferred statewide will be programmed by OSLA for one or more native wildflower protection, enhancement and interpretive projects each year.

## **ARTICLE 2 - Responsibilities**

### **Headquarters**

#### **Office of State Landscape Architecture (OSLA)**

The responsibilities of OSLA are described in Topic 901 of the *Highway Design Manual* (HDM).

The OSLA Chief is assisted by OSLA District Coordinators, serving as liaisons with the districts. The OSLA District Coordinators facilitate, monitor, review, evaluate district activities, and approve appropriate exceptions connected with implementation of OSLA policy and guidelines.

#### **Maintenance Program**

OSLA and the Maintenance Program work together in developing a coordinated roadside vegetation management program.

#### **Accounting Service Center, Office of Financial Control**

The Accounting Service Center monitors and recommends modifications to fee assessment procedures and guidelines.

## **District**

### **District Director**

The District Director is responsible for (1) ensuring policy compliance for planting transportation facilities, and (2) for delivering the program for transportation planting projects on-time and within budget.

### **District Landscape Architect**

The District Landscape Architect (District LA) (1) identifies planting needs, (2) designs and prepares a PS&E (Plans, Specifications, and Estimate) for all types of compatibility improvement work; and (3) as a member of Project Development Teams (PDTs), provides input on aesthetics, roadside management issues, site planning, and assesses visual impacts.

## **ARTICLE 3 - Project Development Guidelines**

### **Master Planting Plan**

Where planting by others is proposed for a highway through a city or other jurisdictional limit, the District LA will provide a Master Planting Plan. The Master Planting Plan may be prepared by a consultant or other entity. The plan consists of drawings, charts, and narrative necessary to guide all future planting activities, including general concepts sufficient to determine types and levels of planting and maintenance responsibilities.

The Master Planting Plan should be prepared in cooperation with local interests and is approved by the District LA. It should be reviewed periodically and kept up-to-date.

### **Priority Rating Sheets**

Priority Rating Sheets are required for all HA25 Highway Planting Restoration and HB32 Highway Planting projects to be placed on the candidate list of projects. See the *Project Candidate List Development Manual* for a sample of the Priority Rating Sheet format.

### **PSR Data Sheets**

PSR Data Sheets will be required for major unprogrammed HA25 and HB32 projects before the projects will be considered for programming. An approved PSR Data Sheet satisfies the requirements for a PSR. The Priority Rating Sheet is attached to the PSR Data Sheet. See Appendix E for a sample format of the PSR Data Sheet.

## **Participation by Others**

Planting by others on Caltrans' right of way is allowed through (1) the encroachment permit process, (2) a Caltrans-administered contract that is funded partially or totally by others, or (3) by leasing the planting area to the owner of the abutting property.

Planting by others is to be guided by a Master Planting Plan furnished by Caltrans.

The priority of a planting project that is normally funded by Caltrans will be improved if partial or total funding is provided by others. Figure 1 provides guidelines for determining local participation in highway planting.

The cost of design and construction engineering should be negotiated for projects that are added to the STIP or SHOPP, as a result of improved priority through local participation. The considerations should include the district's support resources and the effect the contribution might have on the priority rating.

## **Highway Planting 100% Funded by Others**

When others fully fund warranted planting projects in order to advance the timing of construction, they are to provide a four-year plant establishment period, including all water and utility costs; Caltrans will provide the maintenance thereafter. Figure 2 provides guidelines for funding responsibilities for highway planting.

When others provide highway planting that exceeds the allowable maximum cost per hectare, they must establish and maintain the planting, including all water and utility costs, for 20 years.

## **Partial Funding by Others**

When others share with Caltrans in the funding of warranted planting that does not exceed the allowable maximum cost per hectare, the length of plant establishment and payment for water and utility costs will be negotiated. Caltrans will provide maintenance thereafter.

## **Replacement Planting by Others**

If the right of way is currently planted where a highway project is funded by others, the other entity will provide replacement planting. Replacement planting will be equal to or greater than the current allowable maximum cost per hectare.

When the amount of planting is the same or less than that which is damaged or removed, and Caltrans was responsible for prior plant maintenance, the District LA will determine the period of plant establishment. When the planting is more than what previously existed, the other entity will provide plant establishment, water, and utilities for four years.

FIGURE 1 - Determining Local Participation in Highway Planting

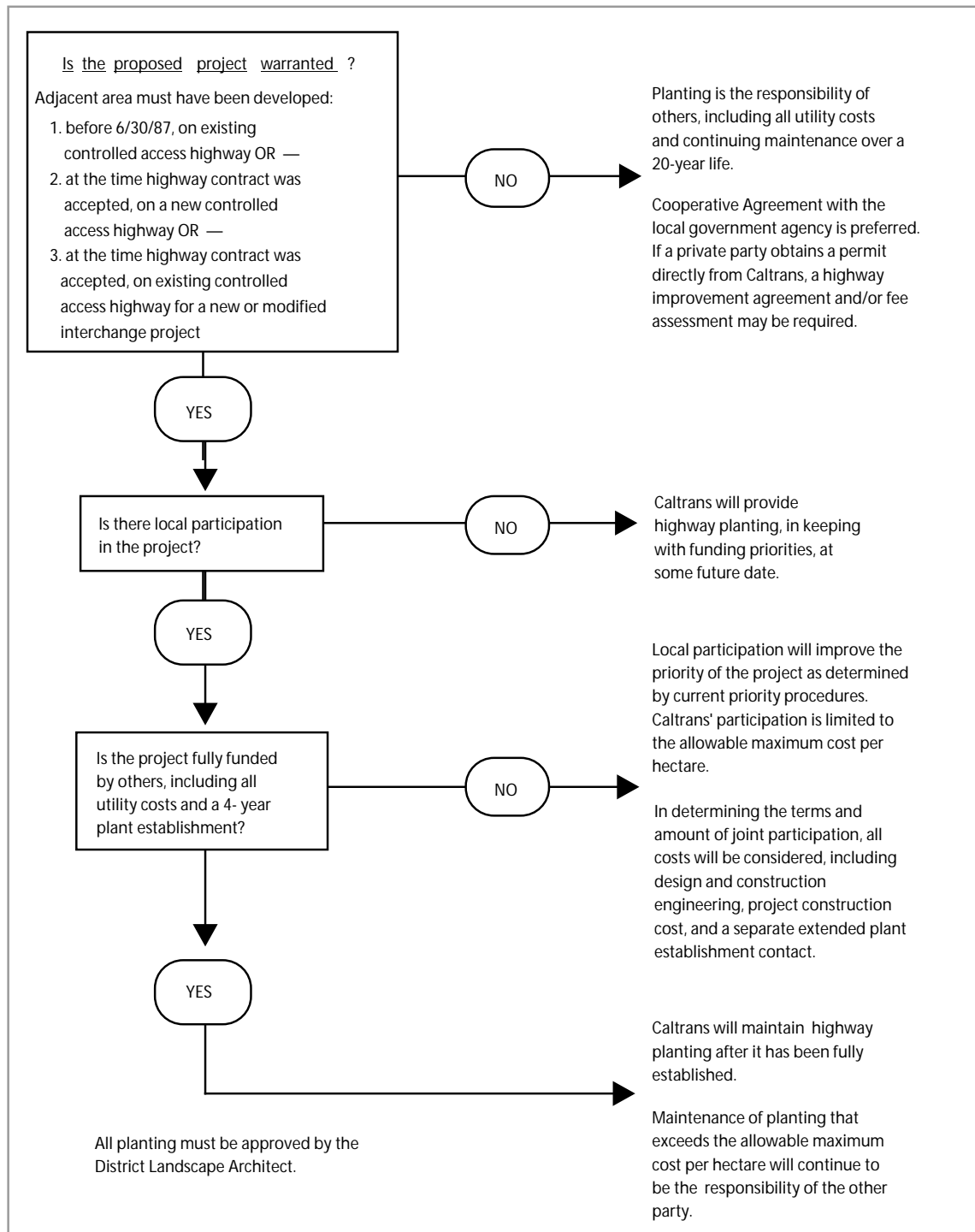


FIGURE 2 - Funding Responsibilities for Highway Planting\*

	<b>** INSTALLATION</b>	<b>1-YEAR PLANT ESTABLISHMENT</b>	<b>16-YEAR MAINTENANCE</b>
<b>CALTRANS</b>			
1. HIGHWAY PLANTING			
2. REPLACE HIGHWAY PLANTING			
<b>MEASURE</b> (Sales Tax)			
1. REPLACE HIGHWAY PLANTING			
2. HIGHWAY PLANTING (up to the maximum cost per hectare)			
3. ADDITIONAL PLANTING (over and above the maximum cost per hectare)			
4. UNWARRANTED PLANTING			
<b>LOCALLY FUNDED PROJECTS</b> (100% by Others)			
1. REPLACE HIGHWAY PLANTING			
2. HIGHWAY PLANTING (up to the maximum cost per hectare)			
3. ADDITIONAL PLANTING (over and above the maximum cost per hectare)			
4. UNWARRANTED PLANTING			
<b>LOCAL PARTICIPATION</b> (Co-Op Projects)			
1. REPLACE HIGHWAY PLANTING			
2. HIGHWAY PLANTING (up to the maximum cost per hectare)			
3. ADDITIONAL PLANTING (over and above the maximum cost per hectare)			
4. UNWARRANTED PLANTING			

CALTRANS

OTHERS

NEGOTIATED

\* Legally required planting is treated the same as highway planting.

\* \* Includes three-year plant establishment.

## **Cooperative Agreements**

The preferred method for handling participation by others is through a Cooperative Agreement with another local agency.

If a developer or other private source is providing funds, Caltrans may issue a permit to the city, county, or other local agency involved, authorizing it to enter into an agreement with the private sector to do planting work permitted in these policies.

The agency, by applying for the permit, will be held responsible for the planting and irrigation systems, plant establishment, maintenance, and all utility costs if the developer or other private source fails to meet the permit requirements.

The agency has the option to cause the planting and irrigation systems to be removed and the right of way restored to Caltrans' satisfaction at no cost to Caltrans in lieu of continuing establishment or maintenance, or water provision. The Cooperative Agreement must spell out the conditions of such action.

## **Highway Improvement Agreements / Fee Assessments**

When a developer or other private entity provides funds and desires an encroachment permit directly from Caltrans, a Highway Improvement Agreement will be required if the project will cost over \$1 million for work within the State highway right of way. Projects costing less than \$1 million will require a general agreement that at a minimum covers installation, establishment, and maintenance responsibilities.

The district may require the permittee to secure utility sources and pay a fee assessment to Caltrans at the time the planting work is started. It is the district's responsibility to determine the need for a fee assessment on a project-by-project basis and, if a determination is made that a fee assessment is not appropriate, to provide an alternate means of maintaining the planting.

If a fee assessment is required, the amount of the fee will be determined as follows:

- Warranted planting — an amount equal to the cost of plant establishment and utilities, for four years
- Unwarranted planting — an amount equal to the cost of plant establishment, maintenance, and utilities for 20 years

Performance bonds or escrow fees may be required to ensure that any installation, establishment, maintenance, and necessary restoration done by others will meet Caltrans standards.

## **Preservation**

Preservation and protection of existing trees and other desirable vegetation is encouraged.

The District LA will review projects that affect existing vegetation and make recommendations to the PDT regarding the need and techniques for preserving existing vegetation where appropriate. The District LA should consult the district's Maintenance Unit and Environmental Unit when making this review.

## **Maintenance**

Only one entity is to be responsible for actual maintenance work at any one location. When both Caltrans and another entity have maintenance responsibilities within the same project limits, a Maintenance Agreement is to be negotiated that results in an expenditure of Caltrans funds and person years no greater than Caltrans would expend for its portion of the responsibility.

When negotiating Maintenance Agreements between Caltrans and local entities, options should be explored. Maintenance exchanges, as well as maintenance by others (including licensed landscape contractors and special programs groups) should be considered. To provide uniform application of policy, any options must be approved beforehand by the Maintenance Unit.

When planting is funded by others, and the most efficient and economical maintenance option is to use Caltrans resources, the additional maintenance cost must be paid for by the other entity; this funding arrangement must be specified in a formalized agreement.

Where public agencies are prohibited by statute from participating in maintenance work, Caltrans and the agency will negotiate a Maintenance Agreement.

## **Roadside Vegetation Management**

Ongoing and project specific coordination is encouraged among engineers, landscape architects, environmental specialists and construction and maintenance personnel to ensure that roadside design and plantings are safe and efficient for maintenance.

Roadside Vegetation Management focuses on identifying and protecting visual resources; conserving potable water; reducing herbicide use; managing and rehabilitating existing planting and irrigation systems; and making the most of special program resources such as Adopt-a-Highway, Conservation Corps and correctional labor.

Tools for improving roadside vegetation management include PDTs, Vegetation Management Teams, Master Plans, Design Intent Statements and training.

## ARTICLE 4 - Project Development Process

### General

Development of all planting work should be consistent with this section as well as other applicable provisions of this manual. Value Analysis principles are to be applied to highway planting, erosion control, etc., as appropriate. Maintenance and construction personnel who are familiar with the site should be involved in the concept formation and design process.

### Project Development Team (PDT)

A PDT will be required for all highway planting and highway planting restoration projects estimated to cost more than \$100,000. The District LA or Project LA should be the PDT leader. Appropriate disciplines and functions, especially Maintenance Landscape Specialists, should be invited to participate in the PDT.

See Chapter 8, Section 4, for more information on the PDT.

### Project Study Report (PSR) Data Sheets

A PSR Data Sheet is required for all major unprogrammed candidate projects for Highway Planting Restoration and Highway Planting Programs. The purpose of the PSR Data Sheet is to identify deficiencies and assess the needs of a project, including design for safety, aesthetics, plant establishment, reclaimed water and storm water pollution prevention.

The project study report phase must include research such as: field reviews, study of as-built plans, determination of remaining roadway item needs, and needs assessment with District Maintenance. A thorough study must be made during this early phase of the project to develop an accurate project workplan including detailed cost estimate, scope and schedule.

Identification of the project deficiencies and needs defines the project purpose and provides the information necessary for the future development of a detailed conceptual plan, which is developed during the Project Report, following approval of the PSR Data Sheet.

### Concept Reviews

The following information should be investigated prior to the development of a planting concept:

- Adjacent land use, including commercial businesses and advertising displays



- Adjacent zoning
- Potable water sources
- Nonpotable water sources and feasibility of use
- Water Assessment fees
- Community and local agency perspectives/concerns
- Prior environmental commitments
- Electrical power sources
- Roadway and prior planting history
- Right of way limits
- Planned future construction, within the right of way and adjacent area
- Climatic conditions
- Soil and ground water conditions
- Lead in soil
- Subsurface materials, facilities, and utilities
- Recovery areas and hazardous working areas
- Ditches, drainage basins, and other unplantable areas
- Safety and aesthetic deficiencies of existing facility
- Design for safety considerations
- Water management considerations: Remote Irrigation Control System (RICS) and automated irrigation sprinkler system
- Vegetation management considerations: strategies for vegetation control, plant establishment, etc.

- PSR Data Sheet with Priority Rating Sheets – or – PSR – or – Other Project Initiation Document
- STIP/SHOPP information

Concepts must be developed for planting or restoration work, including: roadside clearing, weed control, soil preparation, plant establishment, irrigation, water management, and operational strategies. Costs and priorities must be developed for each type or segment of work.

A design concept plan should be depicted on a base plan or aerial photo mosaic (typically 1:2000 scale). Factors related to the proposal, such as adjacent development, local planning and zoning data, utility sources, and staging should also be illustrated.

When a concept plan has been completed, the PDT leader must request a concept review by the District LA and Maintenance Units. The District LA will arrange for a review (normally at the project site) where members of the PDT will be expected to explain deficiencies, justify needs and priorities, and discuss details of the proposal, including costs. The OSLA District Coordinator may become involved in this review.

The purpose and intent of the concept plan is to ensure that the overall project objectives, including aesthetics, safety, water quality and maintenance improvements, are achieved. The proposed concept will be reviewed for conformance with Caltrans policies, guidelines, and standards. The district's concept plan will be used to record changes or conditions required by the PDT. Following the review, the District LA and the Maintenance Landscape Specialist must send a memorandum to the Project LA that summarizes the concepts agreed to, as well as other conditions of approval. If the District LA is a Landscape Associate, the concept approval memorandum is to be signed by the Regional Landscape Architect.

## **Project Reports**

The Project Report is a summation of the conceptual plan development. Upon conceptual approval by the District LA, the district should begin preparation of the Project Report - Highway Planting and Restoration (PR-HP&R). Planting work included with other transportation improvements is to be addressed in the Project Report (PR) for the parent project. Separate planting projects, regardless of funding source or approval authority, are to conform to responsibilities shown in Figure 1. Master PR-HP&Rs to cover several programmed projects are not acceptable.

### **Planting Areas**

The limits of planting need not necessarily coincide with the limits of developed properties. Where there is a minor break between developments, it is permissible to plant into or through the break. Such planting may be done to achieve continuity with adjacent planting or to accommodate conditions such as the view from the road, terrain, road alignment, traffic control signs, drainage, etc.

When calculating gross plantable area, exclude paving, drainage facilities, and other such areas that are not normally planted.

### **Costs**

Where the one-time, up-front water assessment and/or hookup costs exceed the maximum cost per hectare (adjusted annually by OSLA), a project of two hectares or more will be considered only if the additional cost is paid by others. For projects under two hectares, the fee should be negotiated toward receiving the lowest rate possible. These charges are not to count against the cost per hectare of highway planting.

The cost of planting is to be limited to the maximum cost per hectare allowed for highway planting, unless there is an exceptional need (e.g., a narrow strip requiring a row of plants to provide a glare screen for headlights).

The rental cost of the Resident Engineer's (RE) field office is not included in the cost per hectare of highway planting. However, the cost should be included as State-furnished material and expenses, if required.

### **Plant Establishment Periods**

Normally, plant establishment for new highway planting will be performed for four years. Three years are to be included in the planting contract, followed by a second contract for the remaining establishment work, funded from the Highway Maintenance Account (HM2) if funds are available. When the planting is less than \$50,000, a shorter plant establishment period should be considered if the planting is going to be maintained by Caltrans forces and maintenance resources are available.

### **Approval Process**

The District Director (or designee) is authorized to approve PR-HP&Rs.

Approval of the PR-HP&R signifies: (1) authority to prepare the PS&E, (2) approval of the draft Cooperative Agreement, and (3) authority to finalize negotiations on the Cooperative Agreement, if a preapproved Cooperative Agreement was used. If a preapproved Cooperative Agreement format was not used, a draft of the Cooperative Agreement must be submitted to Design and Local Program (DLP), Attention: Cooperative Agreement, for a legal and procedural review. Should significant changes occur following approval, a supplemental PR-HP&R will be required. Three copies of the approved PR-HP&R should be transmitted to the OSLA Chief.

## **Design Review**

Upon approval of the PR-HP&R the Project LA prepares the preliminary plans, special provisions and estimate, including details, plant list, and water management plan. The planting and irrigation design should be sufficiently developed and the plans should be reasonably complete and accurate, including design for safety features, to allow a detailed analysis of how well the deficiencies and justifications described in the PR-HP&R have been addressed.

When the preliminary design is complete, the Project LA requests a review by the District LA. A minimum of 10 working days must be provided for this review. The District LA review is to ensure compliance with planting policies and Maintenance concerns, and to facilitate the incorporation of appropriate methods, techniques and materials. The guidelines and standards discussed in Chapter 900 of the HDM are to be used to evaluate the preliminary design.

Following the review, the District LA and the Maintenance Unit will indicate approval action in a memorandum to the Project LA, confirming any conditions of the approval.

## **PS&E**

Upon approval of the preliminary design, the Project LA will prepare the PS&E for all planting, irrigation, and landscape architectural work. Architectural, engineering, electrical, traffic control plans, specifications and estimates are to be requested from the appropriate Caltrans functional units.

Plans are to be produced in conformance with standards provided in the *CADD Users Manual*, the *Drafting and Plans Manual* and the *Landscape Architecture Project Plans Standards Booklet*.

Preparation and processing of the PS&E is to conform to the *Plans, Specifications and Estimates Guide*. The District LA is to ensure that the PS&E is reviewed and coordinated with all functions, the PDT, and all disciplines prior to submittal. A minimum of 10 working days must be provided for this review.

## **Review of the Draft Contract Document**

During the district review period, the District LA will coordinate final corrections or modifications in order to facilitate the District Office Engineer's final assembly of the PS&E.

## **Design Intent Statement for Planting**

The purpose of a Design Intent Statement (DIS) is to inform the Construction and Maintenance Units of the intent of the planting. This will provide direction so that future construction and maintenance decisions are consistent with the planting concept.

A DIS is required for planting estimated to cost more than \$100,000, whether it is accomplished as a separate contract or included with other transportation improvements. A DIS is strongly advised for planting estimated to cost \$100,000 or less, particularly if there are any unusual aspects about the design. The District LA should verify that the intent is consistent with previous approvals as well as with the final PS&E, and should ensure that copies of the DIS are forwarded to the district's Construction Unit and Maintenance Unit, as well as to OSLA and the Maintenance Program.

The DIS is to be used for highway planting restoration and highway planting projects, as well as for planting in, or associated with, projects in other programs. For this purpose,

in addition to the above referenced work, the following are considered to be planting projects:

- Revegetation that requires maintenance after the contract period. Erosion control is exempt.
- Irrigation upgrades
- Establish existing plants, unless a DIS is already on file
- Planting by permit

The DIS is to be developed from the approved concept and is to explain the reasons and purpose for the planting, including information on the irrigation system and maintenance requirements. The Construction and Maintenance Units should be consulted and their comments considered prior to PS&E submittal.

The DIS is to conform to the format provided in Appendix EE.

### **CTC "One-Liners" and Fact Sheets**

In preparation for CTC funding approval, "one-liners" and supporting Fact Sheets must be prepared for every project. Both must be submitted to OSLA District Coordinator via electronic mail when the Request for Funds is submitted to the Budgets Program. This occurs simultaneously with PS&E submittal to the Engineering Service Center Office of Office Engineer. The "one-liner" and Fact Sheet must conform to the format in Appendix EE.

### **Construction**

During advertisement and construction, the Construction Unit may request to adjust project allocations using the CTC Resolution G-12 process for planting-related work. The District LA or Project LA should review these requests and be prepared to answer any technical questions from Construction. Questions from contractors, suppliers, or others outside of Caltrans should be directed to the Construction Unit.

The Project LA should provide the Construction Unit with a file of design data, quantity calculations, project documents, and special instructions, and also provide the RE with a DIS (see *Construction Manual*).

### **Maintenance**

Upon acceptance of a new project, the District LA or Project LA should be prepared for an operation review and informational meeting with the Maintenance Unit. In addition, the Project LA must provide the Maintenance Unit with a file that includes product and equipment data, names and phone numbers of contact persons, and the DIS.

## SECTION 3 - Safety Roadside Rest Areas

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### ARTICLE 1 - General

#### **Current System**

The California Safety Roadside Rest Area System currently consists of 89 units. Thirteen units have yet to be built to complete the state-wide system. For design details, see Chapter 900, Topic 903 of the *Highway Design Manual*.

#### **New Rest Area Criteria**

New rest areas may be provided by traditional funding, by joint private/public development projects or by projects funded entirely by others. Privatization of existing rest areas may be implemented, typically through a leasing process. Investigations and studies of joint development and privatization opportunities are coordinated in the Office of State Landscape Architecture (OSLA).

### ARTICLE 2 - Policy

#### **Restoration**

When health or safety conditions of existing rest areas facilities cannot be preserved by normal maintenance efforts, restoration is to be performed by contract.

#### **Capacity Exceeded**

When the use of a rest area exceeds the capacity of existing facilities, causing unhealthy or unsafe conditions, a feasibility study should be prepared to determine whether the rest area should be upgraded or expanded. Facility upgrading is to be performed by contract.

#### **Proposals for New Rest Areas**

Proposals for new rest areas will only be considered under any of the following criteria:

- Construction of the 13 remaining units already identified as part of the California Safety Roadside Rest Area System
- Replacement of rest areas previously closed due to unhealthy or unsafe conditions

- Rest areas proposed as part of a Joint Economic Development Demonstration Project
- Where there is a demonstrated need
- Where it could replace an existing rest area

### **Siting Criteria**

- The following criteria must be used in locating a site for a new roadside rest area:
- Site will be on a highway that is a high-volume, rural, principal arterial.
- Spacing is based on closing gaps between existing facilities that are separated by more than 160 km.
- Interchange locations should be considered where the site can be within 0.4 km of the freeway.

## **ARTICLE 3 - Permanent Closure**

### **Process for Closures**

Proposals to permanently close existing rest areas must follow the normal project development process. As a minimum, the following coordination and evaluation will be required when developing the project:

- Investigate the disposition of improvements and right of way, including opportunities for rest-area joint development or other uses. (Park & Ride lot, Caltrans maintenance station, Highway Patrol facility, etc.)
- Develop a Project Study Report (for a major project).
- Obtain comments from representatives of automobile, recreational vehicle, and trucking organizations.
- When appropriate, consult with FHWA to determine need to reimburse federal funds.
- Evaluate the impact that a proposed closure will have on motorists, adjacent rest areas, and other nearby stopping opportunities.

- Provide an opportunity for public hearing.
- Approve the closure with a Project Report.

## ARTICLE 4 - Joint Economic Development

### **Private Sector Caltrans Participation**

"Joint economic development" is the participation of the private sector with Caltrans in the construction, maintenance, and operation of new rest areas. Up to six new rest-area units are authorized for construction as part of the Joint Economic Development Demonstration Project. Legislative authority will be required to construct additional new rest areas using the "joint development" approach. The six authorized projects are to be pursued at interchange locations on Interstate and non-Interstate freeways or on a conventional highway. Other starts will be based upon results of the six demonstration projects.

## ARTICLE 5 - Privatization

### **Private Enterprise Provides Services**

Privatization is a concept whereby private enterprise furnishes services that are normally provided by government. Rest area privatization envisions the selection of a private tenant (lessee) through a competitive bid process, with implementation patterned after the Caltrans' airspace procedures described in the *Right of Way Manual*.

### **Tenant to Pay Operating Costs**

It is expected that tenants pay the cost of operating the rest areas, through leases or other contractual arrangements. Traveler-related commercial services, such as food and fuel, would be allowed at the tenants' expense.



## SECTION 4 - Vista Points

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### **Developed as Part of Road Construction Projects**

If vista points are being considered, the sites should be selected and included in the planning and design phases for the roadway construction project. Vista points should only be provided at locations where there are outstanding points of scenic interest. Special attention should be given to selecting vista points on designated State Scenic Highways.

### **Added to Existing Highways**

When justified, vista points may be developed adjacent to existing highways. The vista-point project will be processed using the project development process for programming and funding projects.

See the *Highway Design Manual, Topic 904* -- "Vista Point Standards & Guidelines".

## SECTION 5 - Aesthetics

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### General

Aesthetics must be considered in the highway project planning and design process. This is particularly important for highways that traverse areas of natural beauty. A reasonable additional expenditure is justified to aesthetically enhance transportation projects.

### Aesthetic Considerations

The following factors should be considered when planning and designing a highway:

- The location of the highway should be such that the new construction will preserve the natural environment and will lead to and unfold scenic positions.
- The general alignment and profile of the highway should fit the character of the area traversed so that unsightly scars of excavation and embankment will be held to a minimum.
- Whenever feasible, wide medians and independent roadways should be provided on multi-lane facilities, as these features add scenic interest and relieve the monotony of parallel roadways.
- Bridges, tunnels, and retaining walls merit consideration as substitutes for prominent excavation and embankment slopes when costs of such alternates are not excessive.
- Existing vegetation such as trees or large brush may be selectively thinned or removed to open up scenic vistas or provide a natural looking boundary between forest and cleared areas. Vegetation removal for aesthetic purposes should be undertaken only with the concurrence of the District Landscape Architect.
- Destruction of desirable vegetation (e.g., trees, specimen plants, diminishing native species, or historical plantings) should be avoided if possible, or minimized.
- Provision for watering and establishment of replacement planting should also be considered.

## SECTION 6 - Transportation Art

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### General

Transportation art is defined as authorized artwork created, constructed, or painted on structures and on or in other facilities or spaces that are within the transportation right of way.

The State has an interest in encouraging aesthetic considerations in the design of all transportation facilities and services. Caltrans recognizes that well-conceived art forms, properly located, can enhance the experiences of those using transportation facilities, as well as enrich the environment of neighboring communities.

Local communities often have the desire to visually express attitudes and feelings about their physical environment, ethnic values, and cultural heritages. Therefore, it is Caltrans' intent, by means of its Transportation Art Program, to encourage others to use its facilities, structures, and right of way spaces for creative expression through the visual arts.

### Policy

Caltrans will encourage and promote enrichment of the cultural and visual environment for motorists and local communities by facilitating and coordinating the placement of artwork by others within transportation right of way.

### Administrative Responsibilities

#### Headquarters

The Chief, Office of State Landscape Architecture, is responsible for the following:

- Managing the Transportation Art Program
- Appointing a Headquarters' Transportation Art Coordinator
- Advising the districts on policy and criteria matters
- Monitoring the adequacy of public participation and application of criteria
- Assisting the districts to assess artwork (if requested)

### **Districts**

The District Director is responsible for the following:

- Appointing a District Transportation Art Coordinator
- Encouraging, promoting, facilitating, and coordinating the placement of authorized artwork by others within transportation rights of way
- Reviewing proposals in regards to (1) community acceptance, (2) regulations governing Caltrans operations, and (3) the safety of the artists and the public
- Approving or disapproving artwork proposals

### **Approvals**

Artists are permitted to place their artwork on Caltrans' property, provided they receive approval from (1) the District Director, and (2) responsible local organizations representing the community affected by the artwork.

### **Financial Responsibilities**

Caltrans will assume the administrative costs associated with securing approvals and permits, including processing permits, staff reviews and, if required, traffic controls.

All other financing of artwork that is not directly involved with the development of new facilities, including labor – materials – supplies will be the responsibility of the artist or the local organization supporting the project.

### **Maintenance**

Caltrans may perform minor maintenance activities associated with artwork, such as litter pickup and other maintenance that is normally associated with the involved facility or right of way.

The artist or responsible local organization supporting the project will be required to maintain the integrity of the artwork for an agreed-upon period, including restoration work and removal at the end of its projected life span or when necessary for some other reason.

### **Ownership and Copyrights**

Artwork located within Caltrans' right of way will be considered as gifts to the people of California and will become the property of the State upon approval of the Director of Finance. However, copyrights may be retained by the artist (creator) or the party commissioning the artwork, and the owner of the copyright may collect royalties.

If the artist and/or other owner desires to transfer the copyright to the State, Caltrans will consider the transfer of copyright as a gift of personal property.

Caltrans reserves the right to reproduce the artwork for promotional purposes.

## **Recognition of Authorship and Sponsors**

The names of the artist and the individual or business sponsor who donate the cost of an artwork may be displayed, in a manner that is pre-approved by Caltrans. The artwork may not be used by the artist or sponsor in any form of commercial advertising.

## **Criteria for Reviewing Artwork Proposals**

- The proposal must have been developed in cooperation with responsible local organizations representing the community immediately impacted by the artwork.
- The community must have approved the appropriateness and acceptability of the content by giving those affected an opportunity to express support or objection to the project.
- The artwork must be appropriate to its proposed setting:
  - It will be in proper scale with surroundings and the predetermined viewing positions.
  - It will not create a distraction to the motoring public.
  - It will not require regrading of the site (exceptions for minor grading may be granted).
  - It will not adversely affect landscaping.
- The concept must be fitting and the material suitably durable for the projected life span of the artwork.
- Financing must be assured for the project – including labor, materials, and supplies.
- A time schedule for installation, reasonable for the type of artwork proposed, must be established and agreed to by the artist.
- Installation activities should conform to those standard traffic handling procedures associated with maintenance activities.
- The artwork must not create a maintenance problem. (Minimal maintenance requirements are expected and will be handled as stated above).

- The artwork location must be reviewed with respect to safety both during and after installation. The artwork itself must be reviewed as well as the location at which it is proposed to be installed. The rationale for the ultimate design decision in regards to safety must be documented in a Permit Engineering Evaluation Report (PEER) if highway operation, maintenance, or tort liability are affected.
- The artist must agree to abide by Caltrans' safety rules and regulations as well as any additional restrictions Caltrans may apply to the project.
- The artwork must not be in conflict with provisions of the Outdoor Advertising Act.
- Responsibility for removal of the artwork at the end of its life span, or in cases of neglect or deterioration, must be assigned to the artist or the responsible local organization.

### **Procedures for Processing Artwork Proposals**

District Transportation Art Coordinators should notify local communities of the Art Program and are to evaluate proposals advocated by individual artists and/or local organizations.

Safety aspects of a proposed site will be thoroughly considered. If it is necessary to decline approval, alternative locations should be suggested.

Artists are required to prepare their proposals in package form. Proposals must include the following:

- A resume of the artist's works and background
- A full description of the proposed artwork, including location, installation details, and proposed materials
- A scale drawing and/or model (Caltrans will furnish necessary site data)
- Structural integrity of certain art forms (Caltrans will check the structural properties through the Division of Structures)
- Time schedule
- Cost estimate
- Source(s) of funding
- Maintenance requirements

The District Transportation Art Coordinator should make sure that responsible local governmental agencies, organizations, and committees, as well as the District Director, are apprised of proposals and their approval status.

The artist or group will secure acceptance from the community immediately impacted by the artwork. Such acceptance may vary, but the community must ensure that those most affected have an opportunity to express support or opposition to the proposal.

The method of community review will be determined by the District Art Coordinator, and may range from a signed petition to a public meeting, depending on how controversial the artwork is.

After securing initial approvals, the package will be submitted to the District Permit Engineer for processing.

The District Transportation Art Coordinator should then send an informational copy of the package to the Headquarters Transportation Art Coordinator (in OSLA), along with the targeted approval and installation dates.

If, at any time during the process, the district recommends any changes or withholds concurrence on a project not yet approved, the proposal may be returned to the artist for revisions.

Within the framework of the policy and criteria stated herein, the District Director has authority to (1) approve art projects proposed by local artists, and (2) issue encroachment permits for the work.

## SECTION 7 - Blue Star Memorial Highway

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### General

After World War II, a nationwide movement was started to pay tribute to the nation's armed forces, by designating various State and national routes as "Blue Star Memorial Highways." In 1945, the National Council of State Garden Clubs, Inc. approved the Blue Star Memorial Highway Marker program. California Garden Clubs, Inc. accepted the program in 1947, when the California Legislature designated Highway 40 (now Route 80) and Highway 99.

### Policy

Caltrans will cooperate with the California Garden Clubs, Inc. in erecting and maintaining appropriate memorial markers on highways the California Legislature has designated as Blue Star Memorial Highways. See Figure 3 for a list of designated highway segments.

### Responsibilities

#### Headquarters

- The Office of State Landscape Architecture (OSLA) is responsible for coordinating the Blue Star Memorial Highway program. The Transportation System Information Program, Office of Highway System Engineering, maintains a log of designated highway segments.
- Legislative Affairs, if requested, will assist the California Garden Clubs, Inc. with preparation of draft legislative resolutions.

#### District

- The district is responsible for assuring that the location of a proposed marker is within a designated segment of highway, and for approving the actual site.
- The district will assume the administrative costs associated with the project, including processing permits and, if required, staff assistance and traffic controls.
- An encroachment permit is required. However, because these markers designate memorial highways authorized by Legislative resolutions, the district will not charge a permit fee.



### **Permittee**

- Highways are designated as Blue Star Memorial Highways by the California Legislature. It is the responsibility of the California Garden Clubs, Inc. to initiate and sponsor Legislative resolutions through their local legislators.
- The permittee is responsible for the cost of all labor and materials involved in providing and installing the marker, as well as any modifications required to the facilities to accommodate the marker.
- If a marker is vandalized or accidentally damaged, the permittee is responsible for its restoration, replacement or removal.

## **Guidelines**

### **Location of Markers**

- Markers will only be erected on highway segments that the Legislature has designated as Blue Star Memorial highways.
- On designated highway segments with safety roadside rest areas, markers should be placed in rest areas.
- On designated highway segments without rest areas, markers will be placed at vista points, historical sites, or other appropriate areas approved by the district.
- The district will work with the California Garden Clubs, Inc. in identifying an appropriate site, determining if planting is desirable, and to coordinate the project. Other than a marker, features such as paving, benches or signs, will not be permitted.
- Placement of markers must consider the effect of the proposed marker on routine roadside maintenance activities, traffic flow and the maintainability of the marker without interference to traffic.

### **Maintenance**

- The district will perform minor maintenance activities associated with the markers, such as litter pickup and other maintenance that is normally associated with the involved facility or right of way.
- Caltrans will not be responsible for maintaining the integrity of the marker. If a marker is vandalized or accidentally damaged, the district will consult with the permittee concerning its restoration, replacement, or removal.

**Dedication Ceremony**

- The California Garden Clubs, Inc. normally conduct a dedication ceremony at the site after a marker has been erected. A representative from the district should attend this ceremony to accept the marker.

FIGURE 3 - Blue-Star Memorial Highway Segments

ROUTE	DISTRICT	AUTHORIZATION	LIMITS	
			FROM	TO
80, 50, 160, 51, 80 (Former US 40)	4, 3	SCR 33, Ch. 82, 1947	San Francisco	Nevada State Line
111, 86, 10, 5, 99, 65,70,20,99, 5 (former US 99)	11, 8, 7, 6, 10, 3, 2	SCR 33, Ch. 82, 1947	Mexican Border	Oregon State Line
8	11	ACR 62, Ch. 107, 1961	San Diego	Arizona State Line
97	2	SR 64, 1961	Weed	Oregon State Line
58	5, 6, 8	ACR 203, Ch. 324, 1969	Santa Margarita (Route 101)	Barstow (Route 15)
680	4	SCR 38, Ch. 175, 1970	Alameda County Line	Benicia-Martinez Bridge
5	11, 12, 7, 6, 10, 3, 2	SCR 61, Ch. 116, 1971	Mexican Border	Oregon State Line
36	1, 2	SCR 36, Ch. 104, 1983	Entire route	—
140	10	SCR 39, Ch. 23, 1984	Entire route	—
101	7, 5, 4, 1	SCR 41, Ch. 24, 1984	Los Angeles	Oregon State Line
40	8	ACR 112, Ch. 143, 1984	Barstow	Arizona State Line
395	8, 6, 9, 3, 2	ACR 112, Ch. 143, 1984	Entire route	—
89	9, 10, 3, 2	ACR 111, Ch. 96 1986	Route 395	Route 5
280	4	ACR 50, 1996	San Francisco (Third Street)	San Jose (Route 680)
254	1	ACR 61, 1996	Sylvandale	Stafford

SCR = Senate Concurrent Resolution  
ACR = Assembly Concurrent Resolution  
SR = Senate Resolution